

Resources for critical appraisal

What is critical appraisal?

The process of accessing and interpreting **research evidence** by systematically considering its **validity**, **reliability** and **relevance** before using it to inform a decision.

Validity

Assessed by looking at the methodologies of the study in more detail (not just jumping to the conclusions!)

- Are the methods robust?
- Did the study address a clearly focused issue?
- How were the participants of the study assigned?

Reliability

Look at the results in more detail – are they credible and repeatable?

- How was the data collected?
- What are the key findings?
- How significant are the results?

Relevance

Can the results be applied to my local health community?

- Were all important outcomes considered?
- Do you need further evidence before finding an answer to your question?

Levels of evidence

- Also called the 'hierarchy of evidence'
- Understanding levels of evidence will help you to answer the question, 'how far can I trust this article?'
- Lists different study types according to how robust they are



Source: Medical Research Library of Brooklyn
library.downstate.edu/EBM2/2100.htm

Benefits of critical appraisal

- Critical appraisal bridges the gap between research and practice (ultimately improving practice and quality)
- It is a systematic and objective way of assessing the usefulness of published research
- Keep up to date for your own professional development
- Improves the rigour of your own research and practice

Resources to help you with critical appraisal

Checklists

Checklists enable you to apply critical appraisal techniques in a systematic way. Select a checklist according to the study design (e.g. Randomised Control Trial, Systematic Review).

Critical Appraisal Skills Programme (CASP) appraisal tools:

<http://www.casp-uk.net/#!/casp-tools-checklists/c18f8>

BestBETS Critical Appraisal Worksheets:

<http://www.bestbets.org/links/BET-CA-worksheets.php>

Centre for Evidence Based Medicine (CEBM) Critical Appraisal Guide:

<http://www.cebm.net/index.aspx?o=1157>

MRC/CSO Social and Public Health Sciences Unit, University of Glasgow

<http://www.understandinghealthresearch.org/>

Glossaries

BMJ Clinical Evidence glossary

<http://clinicalevidence.bmj.com/x/set/static/ebm/toolbox/678178.html>

Centre for Evidence Based Medicine glossary

<http://ktclearinghouse.ca/cebm/glossary/>

Bandolier Evidence Based Medicine glossary

<http://www.bandolier.org.uk/glossary.html>

Additional Reading

BMJ How to read a paper series

Series of introductory critical appraisal articles

<http://www.bmj.com/about-bmj/resources-readers/publications/how-read-paper>

NHS Choices: Behind the Headlines

Appraises the evidence behind health news stories in the media

<http://www.nhs.uk/News>

Bandolier 'What is...?' series

Aims to demystify some of the terminology, techniques and practices used to assess evidence in healthcare, e.g. 'What is a systematic review?' and 'What are confidence intervals and p values?'

<http://www.bandolier.org.uk/extra.html>

Books in the library

(on the shelf at 610.724)

How to read a paper
by Trisha Greenhalgh

The pocket guide to critical appraisal
by Iain K. Crombie

The doctor's guide to critical appraisal
By Narinder Kaur Gosall
and Gural Singh Gosall

and many more...

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Tel: 0151 604 7223 / ext. 8610
E-mail: wuth.lks@nhs.net

Library, Clatterbridge Cancer Centre
Tel: 0151 556 5299 / ext. (56)5299
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